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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,158	05/24/2000	Tsuyoshi Kowaka	192210US0	4954

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EXAMINER

WILSON, DONALD R

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/577,158

Applicant(s)

KOWAKA ET AL.

Examiner

Donald R Wilson

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 55-58 and 60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 55-58 and 60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 1713

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and declaration filed 3/25/03, have been fully considered with the following results.
2. The cancellation of Claims 33-37 overcomes the prior art rejections of these claims and the rejections are withdrawn.
3. Applicant's amendment overcomes the prior art rejection of the now pending claims based upon Sato, and the rejections based upon the Sato reference are withdrawn. It is not seen that Sato fairly suggests achieving degrees of saponification of 99.6 mole % or higher. The rejection is not withdrawn because of applicant's argument that that the PVA of Sato is a modified PVA as opposed to PVA. What applicant refers to as modified PVA is a vinyl alcohol copolymer, which is not seen to be excluded by the present claim language.
4. The amendment and declaration are not deemed to be persuasive in overcoming the remaining prior art rejection for the now pending claims, and the rejections are maintained for reasons discussed below.

Previously Cited Statutes

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Claim Rejections - 35 USC § 103

6. **Claims 55-58 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over:**
 - a. **JP'807 in view of Morrison, Yanai and Schindler, or**
 - b. **Imai in view of Morrison, Yanai and Schindler, optionally in view of Examiner's Notice,**
and further in view of Admissions by Applicant and Yanai, and still further in view of Standiford, King or Ishiwa.The basis of this rejection was stated in Detailed Action § 7-13 of the previous Office Action.

Art Unit: 1713

7. In regards to the new limitations of Claim 55, it is noted that JP'807 exemplifies degrees of saponification of 99.6 mole % and higher, and that Imai teaches degrees of saponification wherein the residual acetyl groups are less than 0.02 mole %.

8. Applicant traverses the rejection stating that "[n]one of the applied prior art addresses the above-discussed problem of the prior art degree of obtaining a relatively high degree of saponification of PVA by using a relatively low mole ratio of alcohol with respect to PVA." This argument cannot be sustained.

Applicant goes on to quote fragments of the teachings of Morrison and Yanai relied upon in an attempt to support an argument that Morrison and Yanai actually teach against the present invention. This in fact is opposite of what is taught. Rather than quote the entire teachings relied upon by the Examiner, applicant selectively pulls out the fragment "--- to shift the equilibrium to the right, it is necessary to use a large excess of the alcohol whose ester we wish to make". However, the rest of the quoted sentence read as follows:

"--- to shift the equilibrium to the right, it is necessary to use a large excess of the alcohol whose ester we wish to make, or else to remove one of the products from the reaction mixture" (Morrison pp 682-683). (Underlining added.)

Applicant also ignores the follow on sentence in the stated rejection, i.e.,

"Morrison also teaches in the same place that the second approach is the better one when feasible, since in this way the reaction can be driven to completion."

Applicant further ignored the teachings quoted from Yanai which were stated as follows:

"It is taught that '--- for the purpose of increasing the saponification degree to shift the saponification equilibrium to the formed product side', and that 'for this reason it is desired to efficiently distill off the ester used, e.g., methyl acetate' (col. 10, lines 11-32)." (Underlining added.)

9. Applicant also argues that "--- it has not been known to use such a shell and tube evaporator in a saponification reaction, much less to reduce the amount of alcohol required to achieve high degrees of saponification." While this is true, the Examiner has not relied upon the teachings of Standiford, King or Ishiwa for such a showing. For the reasons set forth in the previous Office Action it remains that,

"It would also have been obvious to one of ordinary skill in the art to use a shell and tube type evaporator for the removal of volatile methyl acetate in either stage of the saponification process taught and/or obvious over (a) JP'807 or Sato, each in view of Morrison or Yanai, or (b) Imai in view of Morrison and Yanai, optionally in view of Examiner's Notice, as film type evaporators are well known to be used in the field of polymer technology for removing volatiles in order to shift the

Art Unit: 1713

equilibrium in ester forming reactions as for instance is taught by King and Ishiwa, and because shell and tube type reactors are well known and commonly used film type evaporators as for instance is disclosed by Standiford."

It is not seen that applicant has traversed the teachings relied upon in the reference or why it would have been obvious to one of ordinary skill in the art to use a shell and tube evaporator in the saponification processes of the prior art. Applicant cannot show non-obviousness by attacking the reference individually where, as here, the rejection is based on a combination of references. *In re Keller*, 208 USPQ 871 (CCPA 1981).

10. Applicant's arguments supported by the declaration as to why it is more advantageous to use a tower reactor to remove methyl acetate in the first stage, and a shell and tube evaporator in the second stage does not rebut the Examiner's previous argument as to why it would have been obvious to do exactly that, i.e.,

"However, it would also have been obvious to one of ordinary skill in the art to use the column system as taught by Yanai in the first stage wherein a more selective removal of methyl acetate would be desirable and possible due to the multiple stages and reflux ratios possible therein (see Yanai col. 10, lines 29-32). While film evaporators have greater efficiency for removing volatiles they differ from distillation in that multiple stages with reflux ratios is not effected, i.e., it is a single stage (plate) distillation process (see Standiford, p 959)."

It is also pointed out that the motivation to combine references need not be identical to that of applicants in order to establish obviousness.

A *prima facie* case of obviousness (for a composition) does not require the solution of the same problem or recognition of the same advantages as the applicant's invention. *In re Dillon* 16 USPQ2d 1897 (CAFC, en banc, 1990), which overrules *In re Dillon* 13 USPQ 2d 1337 and *In re Wright* 6 USPQ 2d 1959.

"The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious." *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

The prior art need not express the same reason or motivation for making the composition as Appellants to establish unpatentability. *In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996).

Action Is Final

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1713

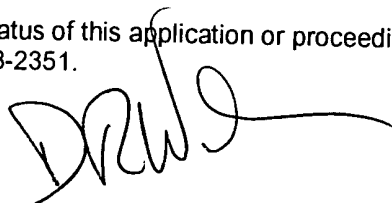
12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Future Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald R Wilson whose telephone number is 703-308-2398.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 703-308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications. The unofficial direct fax phone number to the Examiner's desk is 703-872-9029.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-2351.

A handwritten signature in black ink, appearing to read 'DRW', with a long horizontal flourish extending to the right.

Donald R Wilson
Primary Examiner
Art Unit 1713